Sustainability and Public Water Utilities

South Coast Sustainability Summit
UC Santa Barbara
October 13, 2011
GWD Overview
Goleta Water District

• Started in 1944
• Largest “Special District” in County
• 5-Member Elected Board
• Provides water to over 85,000 people
• Supplies 4 billion gallons of water annually; 11 million gallons per day
GWD Service Area

Goleta Water District Service Area
Water Supply Sources

- Lake Cachuma: 9,322 AF (57%)
- State Water: 3,800 AF (23%)
- Groundwater: 2,350 AF (14%)
- Recycled Water: 1,000 AF (6%)
Water Uses

- Urban: 68%
- Agriculture: 21%
- Landscape Irrigation: 11%

Approximately 14,000 AFY
Sustainability & Efficiency Drivers
Public Policy

– The Clean Water Act
– The Safe Drinking Water Act

– Urban Water Management Planning Act
– State Grants – AB 1420
– Climate Change – AB 32, et seq.

– SAFE Water Supplies Ordinance
– Wright Judgment
Environmental Context

- **Snowpack**: An expected 25% reduction of snowpack by 2050 will change water supply.
- **Hydropower**: Changes in flow and lower reservoir levels may decrease power generation.
- **Flood**: An increase in extreme weather will lead to higher winter river flows, runoff, and flooding.
- **Drought**: Higher temperatures and changing precipitation will lead to more droughts.
- **Groundwater**: Lower water tables due to hydrologic changes and greater demand cause some shallow wells to go dry.
- **Water Quality**: Less fresh water flowing out of the Delta in spring and early summer will allow more salt water to intrude.
- **Demand**: Demand for agriculture, urban, and environmental water will increase.
- **Delta Levees**: Sea level rise will threaten Delta levees.
- **Habitat**: Warmer river temperatures stress cold-water species such as salmon.
Uncertainty

Source: Santa Barbara County Public Works
Sustainability Solutions
Sustainability Solutions

1. Responsible Water Resource Management
2. Operational Efficiency
3. Community Partnership
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Water Supply Management Plan
Groundwater Management Plan

Goleta Groundwater Basin
Sustainability Solutions

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Gravity-fed System Design

The Water Story...
Goleta Water District brings its customers high quality water from local sources and from hundreds of miles away... everyday, around-the-clock, for less than a penny a gallon. Here is how we do it:

Snow melts from the high sierra and flows down river into the Sacramento River Delta.

The California Aqueduct and the 100-mile long pipeline built by local agencies, transports imported water from northern California to the coast.

Water from Lake Cachuma flows by gravity into Tecolote Tunnel, and through the Santa Ynez Mountains to reach the Goleta Valley.

Goleta West Conduit delivers non-potable water to agricultural users along the Gaviota Coast.

Goleta Water District works with Goleta Sanitary District to recycle wastewater for use on landscaping and for toilet flushing.

Recycled Water

Water is used by customers

Water is by customers

Potable Water

Reservoir tanks provide an immediately available source of water to meet high water needs on hot summer days, and during emergencies such as fires.

Goleta's surface water is treated in the District's Corona Del Mar Water Treatment Plant. Water flows by gravity, which reduces pumping costs and increases reliability.

Groundwater: Goleta Water District uses special wells to store excess surface water during rainy periods in the groundwater basin for future use during emergencies and droughts.

The Santa Ynez River flows into Lake Cachuma, providing most of Goleta's water supply.

Los Padres National Forest

South Coast Conduit

Water flows through the South Coast Conduit to local water suppliers, for customers along the coast from Goleta to Carpinteria.
Smart Infrastructure Investment

- Hydro-electric power generation
- Recycled water system booster pump upgrades
- Corrosion protection program to stop leaks
- Well rehabilitation to improve basin recharge abilities
- Sustainable sewage disposal
Leading the Way

• LEED Gold Certification

• Demonstration Garden
Sustainability Solutions

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Targeted Customer Support

- **Landscape Rebate Program** for Residents and Business
- **Water Check-ups** for Residents and Business
- **Large Customers & Institutions**
Leveraging Relationships

- Local Program and NGO Support
- Local Agencies
- State and Federal Agencies
Looking Ahead
Looking Ahead

• GWD Sustainability Plan (March 2012)
• State and Federal Grants
• Further relationship building
Thank You

Chris Rich
Water Supply & Conservation Manager
CRich@GoletaWater.com
(805) 964-6761 Ext. 604